

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) An apparatus for intensification of production of high-viscosity oils which contains a unit for ultrasonic excitation of a well bottom zone that consists of a surface ultrasonic generator and at least one ultrasonic magnetostrictive radiator placed at an end of oil-well tubing (OWT), which are electrically connected with each other by two cords of a three-cord electrical cable, and a unit of the for heating of oil well tubing that consists of a surface high-frequency generator and a line for the oil well tubing heating, which is distributed along the entire length of oil well tubing and heats oil well tubing by high-frequency currents, said line including a third cord of the three-cord electrical cable.

2. (Previously Presented) The apparatus of claim 1, wherein the unit for heating of oil well tubing includes a surface high-frequency generator on a daylight surface, said high frequency generator being electrically connected by a grounded wire to oil well tubing, which is electrically insulated from a casing pipe of a well, and at a location of said ultrasonic magnetostrictive radiator, the surface high-frequency generator is connected to oil well tubing by the third cord of the three-cord electrical cable.

3. (Previously Presented) An apparatus of claim 2, wherein the ultrasonic magnetostrictive radiator has an inside diameter that matches the oil well tubing inside diameter.

4. (Previously Presented) An apparatus of claim 3, wherein the ultrasonic magnetostrictive radiator is made in the form of a hollow cylinder or similar shape.

5. (Previously Presented) An apparatus of claim 1, wherein the oil well tubing heating unit includes one output of the surface high-frequency generator connected on a daylight surface to a first one output of the surface ultrasonic generator and one cord of the three-cord electrical cable which is connected to this first output is a common cord for both generators, and a second output of the surface high-frequency generator is connected by the third cord of the three-cord electrical cable at of the location of the ultrasonic magnetostrictive radiator, to said common cord of said three-cord electrical cable.

6. (Previously Presented) An apparatus of claim 5, wherein said line for oil well tubing heating, by high-frequency currents, further contains at least two inductors placed on oil well tubing and connected to said third cord of the three-cord electrical cable.

7. (Previously Presented) An apparatus of claim 6, wherein the ultrasonic magnetostrictive radiator has an inside diameter that matches an oil well tubing inside diameter.

8. (Previously Presented) An apparatus of claim 7, wherein the ultrasonic magnetostrictive radiator is made in the form of a hollow cylinder or similar shape.

9. (Previously Presented) A method for intensification of production of high-viscosity oils, in which the viscosity of oil in a well bottom zone is decreased by applying of a high-power ultrasonic field on said well bottom zone and in addition, providing heating of the well bottom zone, and maintaining the achieved decreased viscosity of oil during its transportation to the daylight surface through the heating of oil-well tubing (OWT) by high-frequency currents.

10. (New) The method of claim 9 wherein heating said oil well tubing comprises:

distributing a line along the length of said oil well tubing and providing said high-frequency currents through said line.

11. (New) The method of claim 10 further comprising:

providing a high-frequency generator on a daylight surface;

electrically coupling said high frequency generator by a grounded wire to said oil well tubing, which is electrically insulated from a casing pipe of a well; and

electrically coupling said high-frequency generator to said oil well tubing by a cord of an electrical cable at a location adjacent to an ultrasonic radiator.

12. (New) The method of claim 10 further comprising:
- providing a high-frequency generator and an ultrasonic generator on a daylight surface;
- coupling a first cord of a three-cord cable to said ultrasonic generator and said high-frequency generator at said surface and to an ultrasonic radiator in a well;
- coupling said line to said high-frequency generator at said surface and to said first cord at a location adjacent to said ultrasonic radiator, wherein said line comprises a second cord of said three-cord cable; and
- coupling a third cord of said three-cord cable to said ultrasonic generator at said surface and said ultrasonic radiator in said well.

13. (New) The method of claim 10 further comprising coupling at least two inductors on said oil well tubing to said line.